

**What is claimed is**

1. A gravity bending oven for glass panes, having a plurality of heating groups (5, 6) in a tub-shaped oven lower part (1) and in a cover-shaped oven upper part (2), and having a heat insulation (8) on the inside of the oven walls (7), characterized in that the heat insulation (8) has arranged in it a multitude of channels (9), which, in order to carry heat away from the heat insulation (8), have a heat transport medium flowing through them.
2. A gravity bending oven according to claim 1, characterized in that the oven interior has a height greater than 800 mm, a width greater than 2000 mm, and a depth greater than 2000 mm.
3. A gravity bending oven according to claim 1 or 2, characterized in that the heat insulation (8) consists of a heat resisting, poorly heat conducting fiber material, and that the surface of the heat insulation facing the oven interior has a coating made of an agent binding the fibers.
4. A gravity bending oven according to any of claims 1 through 3, characterized in that air or a liquid with high heat capacity are used as the heat transport medium.
5. A gravity bending oven according to any of claims 1 through 4, characterized in that the heating groups (5, 6) are controllable independently from each other.

6. A gravity bending oven according to any of claims 1 through 5, characterized in that the oven upper part (2) can be raised by means of a spindle lifting means (3) and that the oven lower part (1) is displaceable in the raised position of the oven upper part (2), in such a way that the entire opening width of the oven lower part (1) is accessible.
7. A gravity bending oven according any of claims 1 through 6, characterized in that medium-wave quartz radiators are used as first heating groups (5) in the oven upper part (2) and resistance heating elements are used as second heating groups (6) in the oven lower part (1), and that the quartz radiators are supported without lateral guiding means.
8. A gravity bending oven according to any of claims 1 through 7, characterized in that on the oven floor (11) above the heat insulation (8) a heating receptacle with load-bearing capacity is arranged in the form of a grid, that the oven floor region above the grid is subdivided into a multitude of removable floor segments (16), and that in place of removed floor segments, bending molds can be arranged on the oven floor.
9. A gravity bending oven according to any of claims 1 through 8, characterized in that a plurality of incoming-air openings (12) in the oven floor (11) are arranged below the heating groups (6) provided there, and a plurality of outgoing-air openings (13) are arranged in the oven upper part (2), and that these openings are adjustable from a fully closed position all the way to a fully open position.

10. A gravity bending oven according to claim 9, characterized in that the outflowing volume of outgoing air is adjustable via a fan.
11. A method for gravity bending of glass panes in a gravity bending oven, whose insides of the oven walls have a heat insulation (8), comprising the following process steps:
- Insertion (21) of at least one glass pane into at least one bending mold located in the oven lower part (1);
  - even heat penetration and heating (23) of the glass pane to bending temperature by means of a plurality of heating groups (5, 6);
  - cooling of the glass pane following the shaping process;
- characterized in that the gravity bending oven is opened only after a specified solidification temperature has been reached, and that at least until that time the heat released to the heat insulation (8) during the cooling process (24) is channeled off via a heat transport medium that flows through a multitude of channels (9) arranged in the heat insulation (8).
12. A method for gravity bending of glass panes according to claim 11, characterized in that glass panes having a width up to 3000 mm, a depth up to 6000 mm, and a thickness up to 20 mm can be processed.

13. A method for gravity bending of glass panes according to claim 11 or 12, characterized in that for insertion (21) of the glass panes, the oven upper part (2) is raised by means of a spindle lifting means (3) and the oven lower part (1) is subsequently displaced to such a degree that the entire opening width of the oven lower part (1) is available for the insertion process.
14. A method for gravity bending of glass panes according to any of claims 11 through 13, characterized in that during the heating or bending process (23) incoming air is admitted into the oven interior via a multitude of incoming-air openings (12) located in the oven floor (11) below the heating groups (5), and that outgoing air is channeled out of the oven interior via a plurality of outgoing-air openings (13) arranged in the oven upper part (2), said openings (12, 13) being adjustable from a fully closed position all the way to a fully open position.
15. A method for gravity bending of glass panes according to claim 14, characterized in that the outflowing outgoing-air volume is adjusted via a fan.
16. A method according to any of claims 11 through 15, characterized in that it is carried out using a gravity bending oven according to any of claims 1 through 10.